

MAY 14 2008

Docket No. 135270 (553-1044)
PATENT

REMARKS

Claims 1-4, 7-15 and 17, 18 and 21-27 and 29 are pending in this application after this Amendment. Claims 1-4, 7-15, 17, 18 and 21-27 have been rejected. Claim 29 has been newly added. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 3, 4, 15, 23 and 24 have been objected to for informalities. Specifically, these claims have been objected to for failing to provide antecedent basis for the recitation of "the myocardium." Applicants have amended claims 3, 4, 15, 23 and 24 to recite "a myocardium." Accordingly, Applicants submit that the objection has been overcome and should be withdrawn.

Claims 1-3, 7-14, 17, 18, 21-23 and 25-27 have been rejected under 35 U.S.C. §102(b) as being anticipated by Lemelson et al. (U.S. Patent 5,878,746), hereafter Lemelson. Claims 4, 15 and 24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lemelson in view of Brady et al. (U.S. Patent 7,200,612), hereafter Brady. Applicants respectfully traverse these rejections for at least the reasons set forth hereafter.

Lemelson is directed to a computerized medical diagnostic system that includes a fact database 105 and a comparison module 107 to compare changes in a patient's condition. The changes may be determined based on present and past images or a patient's image and a standard image of the same anatomical region (column 7, lines 13-28). Additionally, a feature extractor 102 is included that extracts features from images and that includes segmenting groups of pixels into distinct entities representing separate organs, parts of organs, tumors or other anatomical structures (column 6, lines 27-34).

Brady is directed to a system for processing data for interpretation wherein the submission of data (such as image data) obtained locally from instrumentation is provided automatically to a remote database that grows over time (abstract). The information in the database is from multiple users that may be produced from a plurality of geographically separate sites. In particular, the database 20 includes an interpretation database 22 that stores interpretations produced by different users and an intelligent information database 23 that stores a set of intelligent agents 24 that produce statistical generalizations about particular users, groups

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of users, classes of data, etc. Additionally, software is provided to develop training programs from the information in the database 20 that can include user-supplied examples and examples chosen by the intelligent agent 24 from the database 20 (column 5, line 23 to column 6, line 58).

Independent claim 1 has been amended to recite a knowledge-based diagnostic imaging system that includes, among other elements, a “controller for accessing said database based on said new patient data set and providing automated instructions and wherein said diagnostic equipment compares new and past patient data sets to determine whether additional information is needed and highlights abnormalities in an image generated from said new patient data set, said highlighting including color coding the image or surrounding indicia.” Applicants submit that the cited references fail to describe such a system.

The Office Action at page 3 states that the feature extractor of Lemelson “by extracting the feature, the feature is thus “highlighted”; examiner would further like to point out the definition of “highlight” which is “to attract attention to or emphasize something important”, this is accomplished by extracting the tumor feature...” Applicants respectfully submit that extracting a feature from an image does not necessarily mean that the feature is highlighted *in the image*. The feature may be extracted from the image and otherwise identified to a user, for example, in a report.

However, assuming arguendo that the extraction process of Lemelson also generally highlights the extracted feature, Applicants have amended claim 1 to specifically recite that the highlighting includes “color coding the image or surrounding indicia.” Such color coding of the image or of surrounding indicia is not taught by Lemelson. Accordingly, Applicants submit that claim 1 is allowable.

Independent claim 12 has been amended to recite a method for providing knowledge-based diagnostic imaging including, among other elements “analyzing said past patient data sets of previously analyzed patients based on said new patient data set to generate a suggested action” and “highlighting abnormalities in an image generated from said new patient data set that are unique to a current patient.” Applicants submit that the cited references fail to describe such a method.

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The Office Action does not identify a specific teaching in Lemelson of “analyzing said past patient data sets of previously analyzed patients based on said new patient data set to generate a suggested action.” Accordingly, Applicant submits that claim 12 is allowable for at least this reason.

Moreover, Applicants have amended claim 12 to recite “highlighting abnormalities in an image generated from said new patient data set that are unique to a current patient.” The cited references identify abnormalities based on changes in a patient’s condition (e.g., a tumor growing) or based on compared previously identified abnormalities that define a template. Nothing in the cited references describe highlighting abnormalities that are unique to a current patient. All of the cited references are concerned with identifying similarities between present and past information to categorize or determine a type of a current abnormality. None of the references then also highlight abnormalities that are not identified and unique to the patient. Accordingly, Applicants submit that claim 12 is allowable.

Claim 21 has been amended to recite a network comprising, among other elements “an interconnection between said diagnostic equipment and said database, said database providing past patient images for previously analyzed patients and wherein said interconnection provides on-line real-time interaction between different interconnected healthcare facilities.” Applicants submit that the cited references fail to describe such a network.

Applicants have amended claim 21 to make clearer that the interconnection that provides on-line real-time interaction is between “different interconnected healthcare facilities.” The cited references fail to describe this interconnection between different healthcare facilities in combination with the other recitations in claim 21. The Office Action at page 3 states that “the diagnostic equipment and the database are inherently connected, this connection can be called a “network”... and interconnected facilities can be the database and diagnostic equipment itself...” The database and diagnostic equipment cannot be “interconnected healthcare facilities” as now more clearly recited in claim 21. The interconnected components in the cited references that provide on-line real-time interaction are located at a single physical location. Accordingly, Applicants submit that claim 21 is allowable.

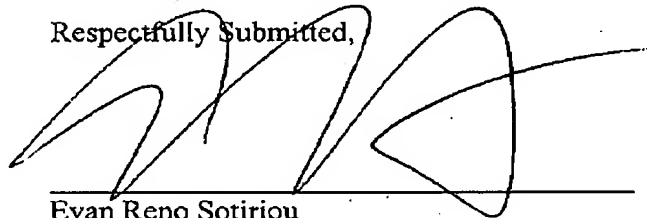
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Moreover, newly added dependent claim 29 recites "wherein said interconnected healthcare facilities comprise at least one of a university hospital, a regional hospital, a private practice and a mobile service." Nothing in the cited references teaches such interconnected facilities in combination with the other recited claim elements. Accordingly, Applicants submit that claim 29 recites further allowable subject matter.

Additionally, Applicants submit that dependent claims 2-4, 7-11, 13-15, 17, 18 and 22-27 recite additional subject matter not anticipated nor rendered obvious by the cited references. Further, dependent claims 2-4, 7-11, 13-15, 17, 18 and 22-27, as well as newly added dependent claim 29, are patentable over the cited references based at least on the dependency of these claims from the independent claims.

In view of the foregoing amendments and remarks, it is respectfully submitted that the cited references neither anticipate nor renders obvious the claimed invention and the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



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